

Appl. No. 09/685,307

Attorney Docket No. 2028-174 (81841.0143)

Amdt. Dated _____

Reply to Final Office Action of December 30, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A clearance seal assembly, comprising:
a stationary member defining a first side, a second side, ~~and an opening~~
connecting the first and second side, and an inner wall surrounding the opening;
a moving member moveably disposed through the opening; and
a sealing member having an internal wall and an outer wall, the sealing member circumferentially disposed between the stationary member and the moving member, the sealing member having a fluid-tight relationship with the stationary member, wherein the inner wall of the stationary member and the outer wall of the sealing member define a first gap and an entry of a liquid into the first gap is blocked by a static seal disposed between the stationary member and the sealing member, wherein the sealing member and the moving member, when assembled, define an initial continuous and uniform second gap, having a size that allows the fluid to fill the second gap but prevents the fluid from flowing through the second gap from the first side to the second side of the opening under an operating pressure differential between the first and the second side, wherein the second gap remains continuous and uniform under operating pressure.

2. (Original) The clearance seal assembly of claim 1, wherein the sealing member and the moving member are made of ceramic materials.

3. (Currently amended) The clearance seal assembly of claim 1, wherein the second gap is defined by ~~an~~ the internal wall of the sealing member and an outer wall of the moving member, and cross-sections of the internal wall of the sealing

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member and the outer walls wall of the moving member have substantially circular shapes.

4. (Currently amended) The A clearance seal assembly of claim 1 comprising:
a stationary member defining a first side, a second side, an opening
connecting the first and second side, and an inner wall surrounding the opening;
a moving member moveably disposed through the opening; and
a sealing member having an internal wall and an outer wall, the sealing
member circumferentially disposed between the stationary member and the moving
member, wherein the sealing member is integrally formed on the inner wall of with
the stationary member,

wherein the sealing member and the moving member, when assembled,
define an initial continuous and uniform gap, having a size that allows the fluid to
fill the gap but prevents the fluid from flowing through the gap from the first side to
the second side of the opening under an operating pressure differential between the
first and the second side, wherein the gap remains continuous and uniform under
operating pressure.

5. (Canceled)

6. (Currently amended) The clearance seal assembly of claim 5 1, wherein the static seal is an annular elastomeric seal removably mounted on the sealing member.

7. (Previously presented) A pump, comprising:
a housing structure having an internal wall defining a suction chamber for containing a fluid;
a piston movably disposed within the chamber; and
a sealing member having an inner wall and an outer wall, the sealing
member circumferentially disposed between the housing structure and the piston,

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~~the sealing member having a fluid tight relationship with the housing structure,~~
wherein the internal wall of the housing structure and the outer wall of the sealing member define a first gap and an entry of a liquid into the first gap is blocked by a static seal disposed between the housing structure and the sealing member and the sealing member and the piston, when assembled, defining an initial continuous and uniform second gap, wherein the second gap has a size that allows the fluid to fill the second gap but prevents the fluid from flowing through the second gap from the suction chamber to an outside of the chamber under an operating fluid pressure, wherein the second gap remains continuous and uniform under operating pressure.

8 (Original) The pump of claim 7, wherein the sealing member and the piston are made of ceramic materials.

9. (Original) The pump of claim 7, wherein the housing structure comprises:

a casing defining the suction chamber for accommodating the piston, and

a bearing circumferentially disposed between the piston and the casing.

10. (Canceled)

11. (Currently amended) The pump of claim ~~10~~ 7, wherein the static seal is an annular elastomeric seal removably mounted on the sealing member.